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ABSTRACT

The document focuses on the evaluation processes of educational programs in nonformal education which are designed to help adults develop new attitudes and practices particularly in developing countries. It consists of two articles which discuss basic evaluation concepts in nonformal education. The first article, Perspectives on Evaluation, by George Papagiannis, discusses various aspects of evaluation in relation to the development of educational programs designed for individual and national development. It introduces some basic concepts and problems in the effective use of evaluation and suggests that evaluation should not only involve the formal learning process and achievements of a program but also its administrative features and the relationship of the program to other facets of the social and political environment. The second article, Evaluation of Broad-Aimed Education Programs, by James A. Farmer, Jr., discusses the need to evaluate broad-aimed programs which seek to affect the quality of the learner's lives through education and to help students cope more effectively with their problems. The phases involved in mixed-scanning, a decision-making approach for evaluating nonformal educational programs, are discussed. Appended are rules for conducting an evaluation, a bibliography of materials on the evaluation of education for development, and general references. (Author/EC)

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Program Evaluation

Functional Education for Family Life Planning, III

by James A. Farmer, Jr.
and
George Papagiannis

Third in a monograph series devoted to the integration of family planning education with literacy and nonformal adult education programs

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A great many people from around the world have played a part in the preparation of this monograph. Many of them will disagree—possibly drastically—with some of the points we have made, but we would be remiss if we did not acknowledge that their ideas and their field experience have affected our thinking.

We think first, and in particular, of the staff and the village participants in the Thai functional literacy and family life planning program. They gave us the opportunity to examine a living program in actual operation and to test theory against practice. We are grateful to them and to Kowit Vorapipatana, director of the Adult Education Division of the Ministry of Education in Thailand.

To initiate a continuing collaboration among program evaluation specialists with an interest in integrated nonformal education, the Thai Ministry of Education and World Education convened a

two-week workshop in Chiengmai, Thailand, in June 1974. Twelve specialists participated, along with about twenty field workers, planners, administrators, and others with a professional concern in the field. They came from Asia, the Near East, Africa, Latin America, and North America. Their work, and the report that summarized the recommendations of the three workshop task forces, provided the basic raw materials for this monograph.

We are grateful also to those who responded thoughtfully to our request for comments on several questions that emerged from the evaluation concepts formulated at the Thailand workshop: William P. Fuller, Gladys Irish, Alan B. Knox, T. A. Koshy, Antonio Santiago, Magnus Stiernborg, Kamol Sudaprasert, E. A. Tugbiyele, and Abeba Wolderufael.

In January 1975, World Education sponsored a discussion of these issues at World Education headquarters in New York. The panel consisted of Jack Mezirow, Dr. Kowit, and the authors of this monograph. Others who took part in that day-long exchange of views, which was particularly valuable to us, were: Ron Audette, Hernando Bernal, Juan Braun, James Draper, David Harman, Eduardo Herrera, Kasama Voravarn, T. A. Koshy, Connie Madayag, E. M. Masale, Daniel Mbunda, Fernando Montes, F. Nyambo, Leonor Ribeiro, Prodipto Roy, Antonio Santiago, Lyra Srinivasan, James Singletary, E. Wanjala, Abeba Wolderufael, and members of the World Education staff.

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James A. Farmer, Jr.
George Papagiannis

FOREWORD

"Hallo!" said Piglet. "What are you doing?"
"Hunting," said Pooh.
"Hunting what?"
"Tracking something," said Winnie-the-Pooh very mysteriously.
"Tracking what?" said Piglet, coming closer.
"That's just what I ask myself. I ask myself, what?"

What, indeed? What are we tracking, studying so carefully, and to what purpose?

This is the third monograph in World Education's series devoted to functional education for family life planning. The field is still relatively new and uncharted, and the professional vocabulary not yet precisely established. What World Education has called "functional education for family life planning," others are calling, more simply, "nonformal education." One of our authors, George Papagiannis, writes of "nonformal education with development

aims,"[1] while James Farmer prefers "broad-aimed nonformal education."

All of us are concerned with educational programs that seek to enhance individual and national development. These programs typically involve people who can neither read nor write. Because there seems to be a relationship between literacy and the adoption of any innovative behavior, literacy training frequently becomes an important component of such programs. But the literacy skills acquired are seen not as ends in themselves but as tools giving those who use them access to information they want and need, and, at the same time, fostering in them a clearer picture of themselves in relation to the wider world. Beyond the attainment of these basic literacy skills lies the capacity to identify and examine problems, weigh alternative solutions, and take appropriate action.

The field is growing rapidly, involving more and more adult learners, attracting larger portions of national budgets than ever before, and finding increasing technical assistance and development funds from international sources.

Because these are not traditional programs and because their effects, particularly in the long term, are not yet clearly known, we must study them carefully. Developing nations especially are looking to them as a means to incorporate millions of illiterate adults into their development plans. How much do these programs cost? Are they effective? Would some other program reach larger numbers of people with the same or similar results for less money?

Program evaluation, the subject of this monograph, generates information needed to answer these questions. Educators on the one hand are likely to be particulary interested in attitude changes, gains in knowledge and skills, enhanced self-image, and improved ability to solve problems, while development planners are usually more concerned with action or actions that result from the program—the "outputs" or behavioral changes. But there are many different people who have a stake in these programs. Each group, and even individuals within each group, has a different set of expectations.

There are the learners themselves. What are their assumptions,

their wishes? They may have sought out the program and enrolled in it believing that their chances of finding a job would be enhanced or because they were told their crops would be better; they may seek particular information—how to control the size of their families, how to repair a pump. Some may have come because they wanted to know how to read and write, or even because they just wanted a chance to sit and rest and visit with a compatible group. Their informal evaluation about how well the program is meeting their needs is the first visible feedback we receive. If the program is not meeting the needs of the learners as they perceive them, then there is usually no reason for them to stay in class, and they leave.

In addition to the adult learners, there are others with valid claims on evaluative data. Teachers and their supervisors, the administrators of the program, the planning agency, and the funding agency are all legitimately concerned. Those who have been directly involved in program implementation are likely to be apprehensive about the evaluation process. We must remind ourselves that the objective of evaluation, as Harbans Bhola has pointed out, is "to make analyses, not allegations; to find causes, not culprits."

The first publication in this monograph series examined World Education's overall program strategy. A key component of this strategy is the analysis and evaluation of the projects in which World Education takes part, coupled with a careful study of relative gains among program participants.

In the second monograph, David Harman focused on program design. Evaluation, he says, serves two distinct purposes in any such design. First, it enables us to tell whether a program attained its objectives, and secondly, it serves as a feedback mechanism for the program planner. Dr. Harman discussed some of the problems and described several possible approaches to the evaluation of adult functional education for family life planning. He strongly recommends that all programs institute, at a minimum, the collection of benchmark data and that evaluative mechanism be built into their earliest planning stages.

In this monograph the authors explore basic evaluation con-

cepts pertinent to the complex area of broad-aimed nonformal education. This field is especially difficult for the evaluator, not only because numerous client groups have legitimate claims on the evaluation materials produced, but also because the objectives of the programs are many, diffuse, and long term. It has been said that if you don't know where you are going, you are likely to end up somewhere else. By addressing this and other problems, the authors have provided realistic guidelines for the evaluation of developmental education.

We hope that this volume will be useful, not only to hard-pressed administrators, but also to planners and funders understandably impatient to quantify results. It may well be, as George Papagiannis suggests, that, in the "hunting and tracking" itself, the program stands to benefit. The very process of evaluation can be clarifying and salutary. At the same time we would remind those evaluators who are not fans of A. A. Milne that the mysterious footsteps Winnie-the-Pooh was so assiduously studying, and which grew more and more muddied the longer he pursued them, were made by the tramping of his own well-meaning feet.

Thomas B. Keehn
President, World Education

September 28, 1975

I. Perspectives on Evaluation

George Papagiannis

In recent years a new type of out-of-school education effort has emerged, especially in the less developed countries. Designed to help unschooled adults to improve their lives and at the same time make a positive contribution to national well-being, these innovative programs focus on fostering critical thinking and on the development of new attitudes and practices in health, family planning, productivity, and political participation, as well as on improving technical and literacy skills.[1] Not only do these programs represent a radical departure from past education policies, but they reflect the growing dissatisfaction with previous

[1] Depending on the specific philosophy of the program, some or all of these goals may be included in the curriculum, although priorities differ among programs. For instance, in some programs literacy is a secondary goal, an instrument with which to develop critical thinking. For others, literacy is seen as primary, and problem-solving methods as merely useful pedagogy.

development strategies that encouraged rapid but inequitable growth and made only minor contributions to the rural areas of poor countries.

These new types of programs—generally termed "nonformal education"—appear to hold great promise in the struggle against rural poverty. And they are currently demanding greater portions of already hard-pressed national budgets and greater assistance from international agencies. They are, however, moving in relatively uncharted waters; little real expertise exists in this area of education except, perhaps, in some revolutionary societies where educational experimentation is the rule, not the exception. Developing curricula that are oriented to rural environments and to adult learners, choosing who shall teach and determining how teachers should be trained for these new programs, establishing working linkages between educational programs and support agencies—all these educational and political issues stand out as major challenges to those committed to this endeavor. Planners, policy makers, and educators, as well as individual program managers are turning to evaluative research[2] to aid them in assessing and improving the effectiveness of these programs, and in judging the policies that advocate the expansion of nonformal education.

The development of new views of evaluation and the recent proliferation of evaluation models more attuned to the unique features of educational programs with development aims suggest that the role of evaluation will grow in importance, as it helps educators move more sure-footedly toward educational programs for both individual and national development.

It is important, however, to be realistic about evaluation. There are some responsibilities that evaluation is not capable of shouldering, just as there are some goals that education is not

[2]Commonly, "evaluation" denotes a process in which a judgment is made. For the process of evaluating educational programs, Edward A. Suchman prefers the term "evaluative research," (*Evaluative Research: Principles and Practice in Public Service and Social Action Programs* [New York: Russell Sage Foundation, 1967], p. 31). In the present paper, the term "evaluation" is used to describe the process in which the scientific method is consciously applied for the purpose of making a judgment about educational programs.

capable of accomplishing. Evaluation cannot solve all our education problems, but, when it is used effectively, it can aid educators in formulating policy, planning programs, and developing them with less uncertainty.

Prospects for Evaluation

On the surface evaluation seems to be a straightforward technical activity. For the most part, evaluation models describe plans for action. Once developed or decided upon, these models guide the selection and development of instruments, the specification of techniques, how staff will be selected and trained, what data will be collected and analyzed, and finally how this information is to be utilized by the appropriate decision maker. Thus, evaluation provides the planner with valuable information that can help him make rational decisions, whether for purposes of setting educational policy, or planning and implementing educational programs with developmental aims.

Yet there is confusion, a sense of skepticism, and frustration among educational decision makers about evaluation. Charles Schulz, through his famous comic strip philosopher, Charlie Brown, provides one explanation:

> "I learned something in school today. I signed up for folk guitar, computer programming, stained glass art, shoemaking and a natural foods workshop. I got spelling, history, arithmetic, and two study periods."
>
> "So what did you learn?"
>
> "I learned that what you sign up for and what you get are two different things."

Not getting what they "signed up for" is the most common complaint of educators in describing their disenchantment with evaluation. In some cases there is confusion about for whom and for what purpose the evaluation is designed. Evaluators sometimes examine theoretical issues of only peripheral concern to the educator whose program is being evaluated. Often, educators hope that evaluation information will provide a single answer to what is essentially a complex problem—that it will take the polit-

out of decision making.[3] Dissatisfaction may also arise because findings are difficult to understand, relying too heavily on statistics, or because they are inconclusive, or because they imply criticism, or because they expose failures.

For these reasons, evaluators are often considered too abstract, too academic, even incompetent, and evaluation is consequently thought of as too cumbersome and slow to be of any use for policy making or program improvement. Evaluators defend themselves by accusing educators of being fuzzy thinkers who do not define their objectives. These problems and the skepticism concerning the utility of evaluation are the result of the lack of a common understanding about what evaluation really is among educators and evaluators. All too often negativism toward evaluation is the result of reacting to symptoms rather than recognizing and dealing with this real source of dissatisfaction.

If those involved understand the limitations, the possibilities, and the process involved, then evaluation can be better used to reduce the uncertainties of policy making and program development, and to increase the overall effectiveness of education programs.

The following section introduces some basic concepts and attempts to clarify some of the stumbling blocks in the effective use of evaluation. The discussion is organized around topics that have emerged in recent discussion or workshops in evaluation: What does evaluation mean? How does it differ from assessment and from research? How can it be used? What are some of the things that evaluation can and cannot do? What method of gathering information characterizes evaluation? Is there one best method? What, in fact, should be evaluated: individual learning performance, social and economic behavior, attitude change, short-term or long-term effects, intended or unintended effects, the learning process itself, the administrative support system, the overall program?

[3] Carol H. Weiss, *Evaluation Research: Methods for Assessing Program Effectiveness* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972), pp. 3-4.

What Evaluation Means

Michael Scriven in his germinal article "The Methodology of Evaluation" defines evaluation in the following manner:

> Evaluation attempts to answer certain kinds of questions about certain entities. The entities are the various educational "instruments" such as processes, personnel, procedures, programs. These questions could be: How well does this instrument perform? What variables from the group in which we are interested are significantly affected by its application? Is the use of this instrument worth what it is costing?
>
> Evaluation is itself a methodological activity which is essentially similar whether we are trying to evaluate coffee machines or teaching machines, plans for a house, or plans for a curriculum.[4]

Given this definition, we readily see that evaluation is an activity we engage in throughout our lives. When we choose one school over another for our children, when we decide that owning a house is better than living in an apartment, when we choose one teaching technique over another, or when we decide that training local leaders to be adult teachers is better than hiring certified teachers—we have been evaluating. In this process we usually follow several steps. We establish criteria, collect information, assess resources, and make comparisons. Then we make a judgment.

The process is not necessarily conscious; in fact, we sometimes forget or ignore critical steps. We often neglect, for example, to gather enough information or the right kind of information about our options or alternatives. Sometimes we do not collect any at all. Sometimes we decide upon some action, such as adopting a new teaching technique, without considering its costs. Finally, the

[4] Michael Scriven, "The Methodology of Evaluation," in *Evaluating Action Programs: Readings in Social Action and Education*, ed. C.H. Weiss (Boston: Allyn and Bacon Inc., 1972), p. 123.

criteria we use in the judging are often inappropriate or ill-conceived. Effective evaluation requires that we not miss any of these steps and that we carry them out thoroughly. We do this by making the evaluation process a conscious activity that relies on established standards of methodology developed in the various fields of social science and economics.

Guided by scientific methodology in the collection of data, evaluation leads to and includes judgments, a process whereby we determine worth. If there are no judgments, no application of value to facts, or no comparisons of the information against normative criteria, evaluation has not taken place. For instance, if we discover that 10 percent of the adult participants who completed a functional literacy program with a family planning component now practice family planning, we have an assessment but not an evaluation of the program. On the other hand, if we had established that in this program 30 percent would be considered good, and consequently judged that the program needed improvement or reformulation, then, and only then, would we have conducted an evaluation. Measuring change alone is not sufficient; these facts have to be compared to standards.

There is another important distinction to be made if we are to understand the characteristics of evaluation–namely, the distinction between evaluation and research, which has been a major source of confusion among educators. Time and time again research is characterized as scientific, and evaluation as nonscientific. This is a false distinction that has contributed to many misconceived notions about evaluation and its implementation. The distinction between the two is not in methodology but in purpose. Both research and evaluation can use the methods of the social sciences or approaches such as systems analysis and historiography. The principles and methods are similar; the purposes differ. Carol H. Weiss distinguishes between the tendency of evaluation to address itself to the issues named by the decision maker in order to provide serviceable solutions, and the tendency of research to serve a broader, and often less immediately practical purpose, sometimes bringing with it terms, methods, and even interests that

are primarily the concern of the researcher himself, and his professional colleagues.[5]

Within the evaluation field itself there have emerged two relatively distinct strategies. Blaine Worthen and James Sanders point out that the major differences center on the role of evaluator and the judgment function—the question of whether the evaluator or some other decision maker is responsible for completing the evaluation by making judgments on the basis of the information collected.[6]

In the *judgmental strategy*, the evaluator not only collects information and compares findings with some standard, but also makes a judgment and a set of recommendations. In the second strategy, which might be termed the *informational strategy*, the evaluator gathers the information, which he turns over to the appropriate decision maker, who in turn makes a judgment that leads to some action. The informational strategy implies that the judgment and decisions must be made by those policy makers who will consider not only the data collected and external standards or norms, but other factors beyond the scope of the actual evaluation such as staff views, public opinion, funding, participant needs, and even the political importance of the program, regardless of its effectiveness, although those very factors themselves could, and often should be the subject being evaluated. The judgmental strategy implies that the goals of the educational program must themselves be subject to evaluation, thus necessitating the evaluator's hand in policy analysis. Informational strategy assumes that the goals are fixed and are not to be evaluated or challenged, at least not by the evaluator. In both approaches, however, the identification of goals is a required step.

There has been considerable advocacy on behalf of one strategy over the other. Actually the approaches complement each other and serve different roles. Both require that scientific methods be

[5] Weiss, *Evaluation Research*, p. 6.

[6] Blaine R. Worthen and James R. Sanders, *Educational Evaluation: Theory and Practice* (Worthington, Ohio: Charles A. Jones Publishing Co., 1973), pp. 24-25.

used for gathering data and that judgment be exercised; the goal of both is to assess worth and merit in order to recommend future action. What is important is that the strategy used determines what role or roles the evaluator will play. Problems arise if the decision maker thinks he is adopting one approach, but ends up with the other—if, in effect, he doesn't "get what he signed up for."

The Roles of Evaluation

Scriven delineates two roles for evaluation: *formative* and *summative*.[7] Formative evaluation produces information that is fed back during the development of an educational program in order to improve it. Summative evaluation provides information for a final judgment. Whether an evaluation effort is formative or summative depends on the reasons for the effort, not on what is being evaluated, the policy or methodology used.

Some have misunderstood formative evaluation to mean evaluation of the means employed in a program, such as pedagogical techniques, and summative evaluation to mean the examination of tangible results. It is not that clear-cut. For instance, suppose that in the initial development of a functional literacy program two alternative pedagogical techniques were employed: programmed instruction and group discussion. The program director wants a final judgment on which method is better. The evaluation to be conducted will be summative, not formative. The program director does not intend to improve either method or to determine whether what was intended is being implemented. What the director wants to know is which one to choose in expanding the program. On the other hand, if the program is just beginning, and the program director, experimenting with a number of approaches, wants first to make sure that every method employed is functioning as intended, then a formative evaluation will provide guidance for improvement.

Whatever the specific role of evaluation might be, it is always in relation to a need to know something in order to make sound

[7] Scriven, "Methodology of Evaluation," pp. 123-136.

decisions. This occurs at a variety of levels: policy, planning, implementation, development, and certification. At each of these levels, the question can lead to either formative or summative evaluation, or a combination of both. Weiss clarifies this issue:

> The important distinction ... is between the policy maker and the program manager.... If it is directed at answering the policy questions (how good is the program overall?), evaluators should report to policy makers. If the basic shape of the program is unquestioned and the evaluation issue centers on variations in specific features, the evaluation should probably be responsible to the program managers.[8]

If the decision has to do with whether to expand, contract, or change the program, the policy maker should be responsible. If it concerns which methods, structures, or staff patterns to use, the program manager should be responsible.

The evaluator and the appropriate decision maker must discuss carefully which questions need to be answered and what role the evaluation is going to play. A formative evaluation system should be built into every program. This enables the decision maker to develop the information base needed for making changes to improve or restructure the program. At the same time, decision makers, and others such as funders, planners, and policy makers, might want an evaluation that determines the merit of the program for a "go/no-go" decision. The judgmental strategy is more suitable to the summative role while the informational strategy is more suitable to the formative role.

Summative evaluation leads to a final decision or judgment concerning a technique, a policy, or a program. Did it work or didn't it? Is it better than or as good as some other approach? Is it worth it? These are essentially policy questions. Because of the importance of this particular evaluation role and because there is always some group that has a stake in what is being evaluated, it is

[8] Weiss, *Evaluation Research*, p. 22.

probably best that the evaluator make the final judgment along with recommendations.

On the other hand, when a policy or a program is still in the experimental stage, the critical questions are likely to be: Are we doing what we intended? If not, how satisfied are we with what we are doing? If we are dissatisfied how can we improve or move closer to what we intend? Here the decision makers or those who have a stake are clearly the ones who must judge.

This topic touches on the choice of evaluator. Should it be an outsider, or a person who is on the program or policy staff? There are persuasive arguments for both external and internal evaluation. The critical issue is who will initiate the evaluation and for what purpose. If it is a summative evaluation, the person who conducts the evaluation should not have a stake in what is being evaluated. If it is formative, having a stake in what is evaluated may be a positive factor.

Finally, evaluation, whether formative or summative, serves as an "educational intervention" for those who initiate the evaluative process as well as for those who are the object of it. Evaluation makes us conscious of the strengths as well as the shortcomings of our educational and development activities. In revealing shortcomings, it guides efforts to improve; in pointing out strengths, it motivates efforts to expand and replicate good programs.

Views Implicit in Education and Evaluation

Just as there is no way to take the politics out of decision making, there is no way to take philosophy and ideology out of educational policy and evaluation. This is particularly true when evaluation is applied to educational policies and programs that claim to be advancing developmental goals at both the individual and the national level. Educational programs, whether delivered via school or nonschool environments, are based on underlying theories and beliefs about the way people learn and about what is learned. Educational programs with development aims are based, in addition, on beliefs and theories about how and what social, economic, and political behaviors will emerge, such as acceptance

of family planning or increased political participation. Bracketed together, these "theories" represent the intervention theory upon which the program is based—the blueprint that guides the development and implementation of the program. These theories or explanations of the way things are believed to work are often implicit and are based on sociological, political, and psychological assumptions.

What should be emphasized here is that evaluative research and the various evaluation models also have implicit assumptions about the way things work. We noted earlier that evaluation was based on a specific methodology. The scientific approach, however, is not a conceptual tool in isolation; it too is dependent on the perspectives of the various social sciences—sociology, economics, political economy, anthropology, and psychology.

Historically, both education and evaluation have been closely associated with psychology.[9] Even today, many evaluators and educators make little distinction between the processes of education and those of psychology. Similarly, little distinction is made between educational evaluation and individual measurement. The emphasis in past evaluation efforts on the individual measurement of learner outcomes is in part the result of psychology's influence on education. Even today, this heritage influences what the evaluation specialist chooses to evaluate and the measurement tools to be used. It is only in the past few years that the methods and theories of other social sciences are beginning to be used by educational evaluators.

We shall attempt to illustrate some of the fundamental differences in philosophy, ideology, and social science perspectives and show how they might influence what is evaluated and how it is evaluated.

Perhaps the most important assumptions underlying education, development, and evaluation are the notions of direction and progress. Most developmental educators accept what James Draper of the Ontario Institute for Studies in Education calls the "reality of change" and agree that this is a process to be encouraged. A

[9]Worthen and Sanders, *Educational Evaluation*, pp. 2-3.

review of the national budgets of every country in the world—revolutionary and nonrevolutionary—would confirm the extent to which governments have committed themselves to change. There is, however, little agreement on what direction that change should take. Which of the alternative futures do we choose? What methods or schemes do we harness to bring about this change? Should the focus of control be individual or collective? To what extent do we rely on individual-oriented strategies, primarily educational? To what extent do we emphasize institutional strategies, basically noneducational? To what extent must they complement each other? How will we know that our strategies are moving us toward specified development goals? How will we know when to intervene to correct the process? And finally, how do we use our often poorly distributed and limited resources to promote this process?

Many theories, each with its own implicit values, provide tentative answers to these questions. Ideas about the educational process, development aims, and goals of evaluation are directly affected by these often conflicting perspectives. Technical inadequacies, faulty communications, wishy-washy decision makers, or incompetent evaluators are blamed for what is essentially the result of competing values and perspectives. Some of these problems collect around such questions as: What is important in education? What are the social and economic goals to be, and who will choose them? This is why it is sometimes critically important that we evaluate goals as well.

As a brief illustration of these conflicting perspectives, nonformal education may be viewed, on the one hand, as an attempt to exploit rural people by providing narrow educational programs that lower their aspirations and steer them away from schooling, still considered the main avenue for success in most nations today. Or it could be viewed as liberating or creating a new consciousness and new competencies among its participants. Depending on the assumptions held, any single nonformal education program might be evaluated in any number of different ways.

There is tremendous disagreement in the educational community on such questions as how people learn or what role

education plays in social change. No matter how sound the reasons are, this "creative tension" among educators and evaluators is both confusing and frustrating to the decision makers. Evaluators, educators, and educational policy makers must begin to think more explicitly and systematically about their unarticulated ideologies. The resultant "heightened" state of mind, as Draper calls it, will of itself improve the quality of evaluation and lessen the frustration, although not necessarily the conflict, which decision makers face today.[10]

Let us take a brief look at some of these points of conflict in greater detail.

a. Learning process

When we refer to education we usually are referring to the learning process. How should content, instruction, or the teacher-student roles be structured within a learning environment? To what extent is learning learner-centered and based on individual needs or collective needs? How, actually, does learning take place?

The educational ideology and psychological theory an educator or an evaluator holds with regard to the learning process influence what should be evaluated and how. Lawrence Kohlberg and Rochelle Mayer, in their article "Development as the Aim of Education," contrast three streams of educational ideology and the psychological theories—humanistic, behavioral, and developmental—that complement these ideologies.[11] Each of these views would draw the evaluator toward different aspects of the learning process. If the evaluator is a behavioralist, for instance, evaluation would focus on specified objectives and the extent to which learners performed according to these specified goals. If the evaluator had a humanistic orientation the focus might be on how liberating the educational experience has been. From a developmental perspective, on the other hand, the evaluator might focus on the learning process itself; for instance, on the interaction

[10] Lawrence Kohlberg and Rochelle Mayer, "Development as the Aim of Education," in *Harvard Educational Review*, vol. 42, no. 4 (November 1972), pp. 449-496.

[11] James A. Draper Jr., "Evaluation: An Investment in Learning," *Literacy Discussion*, vol. 5, no. 3 (Fall 1974), pp. 441-469.

between the learner, his peers, and, say, some controversial issue. The point is that while a competent evaluator will attempt to evaluate an educational program on its own philosophical terms, the administrator must always be on guard against the evaluator's natural strain toward his own philosophical inclination.

b. Relationship between education and development

When the educationa. process is viewed as it influences or is influenced by the economic, political, and social system, the issues become even more complex. When we speak of developmental aims, and how nonformal education programs might contribute to social change, we are again faced with contradictions. Philip Coombs and others have recommended that nonformal education should serve as a developmental tool for agricultural or rural development. This assumes that nonformal education possesses the capacity to contribute to changes in the life of the nation and in the lives of individuals. Coombs states: "It would clearly be beneficial in many countries to deploy resources more heavily into various familiar types of adult education–to those, that is, which are linked both to the growth of individuals and to that of the economy."[12]

There is, however, evidence to indicate that the relationship between development and education–whether formal or nonformal–is not necessarily benign. To what extent can we assume a benign relationship? Does Coombs believe that all nonformal education is linked to development? Is he suggesting that some programs are linked, and some are not? If so, does this mean that we strengthen the ones that are and create the link where there is no link? If we accept that some are not linked to development then we must assume that only under certain conditions does nonformal education lead to development. This distinction is critical. If we assume the relationship is benign, then all we have to do is treat program outcomes as proxies for long-term social and economic outcomes and evaluate only the former.

[12] Philip H. Coombs, *The World Educational Crisis: A Systems Analysis* (New York: Oxford University Press, 1968), pp. 170-171. For a critical commentary that raises serious questions concerning Coombs's analysis and hence his recommended solutions, see Martin Carnoy, "Review of The World Educational Crisis," in Harvard Educational Review, vol. 44, no. 1 (February 1974).

There is a "politics of linkages" too often ignored by educators in their efforts to mount education programs with development aims. Everyone agrees that linkages are essential and lip service to their importance is always paid in the first paragraph of any proposal for the development of these types of educational programs. After they are funded, however, it is evident that many educators simply assume the existence of linkage rather than attempt to bring it about or at least to verify that it exists. James Farmer (see Part II) recommends that the evaluator examine what learners do with their learning. This suggests that efforts to promote or forge linkages are a critical part of the program and worthy of evaluation. If linkages are lacking, then focusing on the causes of these lacks and replanning with this goal in mind would enhance any program greatly.

James Coleman attempts to divide theories of change into two broad classes, distinguishing between theories that start with changes in the social condition and those that start with changes in individuals.[13] Theories of change that argue that changes must start in the social condition suggest that educational efforts must be accompanied by noneducational changes or the efforts will fail. On the other hand, individual-centered theories suggest that education can play a powerful independent role in creating change.

Therefore, the view of social change that one holds determines to a large extent the way one would implement nonformal educational programs or their evaluation. However, policy makers, program planners, managers, and evaluators rarely make their views on social change explicit and, for that matter, may not be aware of them. This lack of awareness can lead to programs which have contradiction built into the "theories of intervention" upon which the programs are based. The implications of this for evaluation are clear. When, for example, it is assumed that education and development are benignly linked, a common tendency is then to assume that, if a certain amount of learning can be proven to have taken place, the expected development will

[13] James S. Coleman, "Conflicting Theories of Social Change," in *American Behavioral Scientist*, vol. 14, no. 5 (May/June 1971), pp. 633-650.

necessarily follow. All too often both educators and evaluators uncritically accept this assumption and believe that evaluation of learning outcomes alone is sufficient.[14]

Educators and evaluators owe it to one another to discuss these issues thoroughly before they start working on the details of an evaluation model. Evaluators usually ask decision makers to articulate their program philosophies. But if evaluation is truly to serve as an educational intervention, the evaluators themselves should make their own values and views explicit. There should be for the most part an agreement on the important assumptions and, when there is not, there should be at least a clear understanding of where the differences lie. An exception to this consensus rule is when someone—a researcher, a politician, or a community critic—challenges the underlying theories of a program or policy, that person might conduct evaluation to show that even if the program did everything it was supposed to, it might create other problems more serious than those solved, or that the goals themselves are misguided. But this kind of evaluation should be conducted, as it usually is, outside of the educational organization in question.[15] Nevertheless, it is an important role to be played in the process of policy formation and reassessment.

The Methodologies of Evaluation

While it is important to choose an appropriate evaluation model for a program, it is just as important to choose a methodology appropriate to what is to be evaluated. Evaluation methodology refers to the methods of gathering and analyzing information. All methodologies used to gather and analyze information reflect the perspectives of those carrying out evaluation. These methods are neither neutral nor without bias; they are usually designed to gather information to conform to the requirements of those perspectives.

[14]Nathan Caplan and Stephen D. Nelson, "On Being Useful: The Nature and Consequences of Psychological Research on Social Problems," *American Psychology*, vol. 28, no. 3 (March 1973), pp. 199-211.

[15]Martin Rein, "Values, Social Science, and Social Policy," working paper, no. 21, Joint Center for Urban Studies of M.I.T. and Harvard University (June 1973), p. 3.

Methodologies reflect value choices. For instance, the usual cost-analysis techniques assume that you can put a dollar figure on educational inputs and outputs—that you can summarize the diverse characteristics of education in monetary terms. Surely this is a controversial assumption. Similarly, techniques that examine consensus among program staff often are built on the assumption that consensus is good in and of itself, whereas what is required periodically for creative programming and creative learning is conflict. The point is that instruments and techniques are always used in some context and the choice of methods is not strictly technical.

Broadly speaking three kinds of methods characterize data collection.[16] One method, the historical approach, emphasizes a review of past events through examination of memos, official documents, student records, staff reports, and statistical records—in general, information prepared by others, usually for reasons other than evalua ion. A second method depends on mechanical devices such as tape recordings and structured instruments such as tests, interview forms with scales or fixed-alternative choices, structured observation instruments, or checklists. The third method depends more on unstructured observation, open-ended interviewing, self-reporting, diaries, or unobtrusive measures. Although each of the techniques of data collection has evolved out of one social science discipline or another, the fields have borrowed enough from each other so that it is no longer easy to categorize them strictly.

The historical approach looks at the past either to explain something in the present, or to predict something in the future. This kind of inquiry is more likely to be conducted inductively than deductively, depending on the perspective of the evaluator and the level of specificity of the object to be evaluated. For instance, if one wants to learn what information has been used to make program decisions, this desire guides the inquiry to a large

[16] This section draws heavily on the review of methods for collecting evaluation data found in Worthen and Sanders, *Educational Evaluation*, pp. 286-287. See also G.C. Helmstadter, *Research Concepts in Human Behavior: Education-Psychology-Sociology* (New York: Appleton, 1970).

extent. The evaluator will examine records and memos that touch on this subject. On the other hand, one might wish to use the historical approach to ascertain causes for certain failures or successes in the program when there are no strong clues as to what they might be. So the net is thrown wide.

The historical method is helpful in appraising why things are as they are in the present, and it can be especially useful in examining social action programs or educational programs with development aims, because these types of programs do not often lend themselves to more empirical experimental techniques. However, this approach has drawbacks as well. Most of the documents examined were prepared for purposes other than for evaluation; thus, what was actually meant and what can be inferred is open to interpretation. Often, what has been left unrecorded is more important than what has been recorded. In addition, those who do the recording usually represent only one of many possible views of the situation.

The second method, using the mechanical and statistical tools of social research, is much more deductive in style. It assumes that the questions we are asking and the behavior we observe are the important components. If we use tests, it suggests that what is important is knowledge skills. For example, if we use structured interviews we assume not only that we have the right question but that we have determined the appropriate range of answers. This holds true for structured observation schedules as well.

Mechanical techniques such as audio or video taping are also characterized by this assumption insofar as someone has to decide where to put them. If they are put in a classroom, it is because someone believes that the classroom is an important place to record. The theory guides the data collection and at the same determines what is important and what is not. These instruments and techniques fix and choose responses that are considered important, whether or not the subject agrees.

The advantages of this approach are that observations can be summarized, standardized, and generalized. Tests and similar devices are relatively easy to administer and can be scored objectively. But there are disadvantages, too. Mechanical devices

are expensive and present problems of maintenance and cost effectiveness. Structured observation techniques are inflexible and often lump dissimilar information together or, worse, record unimportant data. Structured interviews or questionnaires with fixed or selected answers are always faced with validity problems. The most serious weakness of structured observation and interviews, however, is that the method is likely to overlook or ignore any activity or action that was not intended by the planner or anticipated by the evaluator. This approach also suggests that the "reality" constructed with this type of information is more important than the subjective reality that any one respondent might report.

The third method is based on unstructured observation, entailing a more inductive approach. This method allows those who are the subject of the evaluative investigation to play an active role in interpreting the meanings of their actions. When questionnaires and interviews are used, they are open-ended; subjects are encouraged to elaborate on their answers, and often on the quality or appropriateness of the question itself. This approach takes into account the subjects' views and interpretations. Most importantly, it tends to allow for the unusual or the unique.

It does have weaknesses, however. It assumes, first, a high level of awareness on the part of subjects. Just as the previous method has a behavioral bias, so this approach has a person-centered bias that emphasizes reality as perceived by the individuals questioned. Second, the method depends on the accuracy of the respondents' memories. Third, due to the extensive contact required with each subject, there is rarely time to obtain the large sample necessary for accurate comparison. Finally, this method implies that the evaluator's biases are controlled when, in fact, all it does is better mask them. No matter how unstructured the data gathering effort is, there is some theory, some principle or hunch, that guides the data collection.

This comparison of methodologies is woefully incomplete, but its purpose is not to present a comprehensive lesson in methodology, but to illustrate that no method is free of subjective

influence and that each technique has advantages and disadvantages. In a well-conducted program evaluation, techniques from one or all of these approaches might be drawn upon.

One guide for the use of these various methodologies should be the length of time the program has had to develop. In the early implementation and developmental stages, the unstructured approach is probably most appropriate; in the later stage of program development, when summary judgments are more likely to be needed, the historical and structured approaches are more appropriate. The unstructured approach could lead to the discovery of factors or items that could be standardized for later use in the structured method. This would offset some of the problems with validity that plague the more structured, more deductive, approaches and techniques.

What Is Important To Evaluate?

Because psychologists have so dominated the field of education and evaluation, evaluation in the past focused on individual performance or achievement. But in recent years there has been a dramatic shift away from strict testing and from evaluating individual performance toward evaluating the overall effects of an educational program.[17] This shift is the result of growing awareness that the learning process, though fundamentally psychological and person-centered, is strongly influenced by non-psychological factors. Learning occurs within a real-life situation, one that is educational, political, social, cultural, and economic simultaneously.

Any learning environment is embedded in a supporting organizational setting which is yet another subsystem of the community. In fact, educational programs with development aims are

[17]In 1963, Cronbach, in a seminal article on evaluation, pointed out the different possibilities of evaluation. Defining evaluation broadly as "the collection and the use of information to make decisions about an education program," he adds, "It becomes immediately apparent that evaluation is a diversified activity and that no one set of principles will suffice for all situations." This new perspective has enabled us to look at the educational enterprise as a whole, rather than in terms of its learning outcomes alone. See Lee J. Cronbach, "Course Improvement Through Evaluation," in *Curriculum Evaluation*, ed. David A. Payne (Lexington, Mass.: D.C Heath & Co., 1974), pp. 114-115.

designed to make a contribution to the community. Therefore, in order to evaluate the effort without distortion, the overall program and its influence on the community *must* be evaluated, and, conversely, the reciprocal effect the community has on the program.

This view of what to evaluate suggests new areas to consider when deciding where and how to intervene in a program in order to improve it. It suggests that we look not only at the formal learning process and its achievements, but at such different aspects of a program as its administrative features, and the relationships of the program to other facets of the social and political environment. Certain elements of the community are resistant to change. What are they, and can program changes overcome these resistances? Have political and economic factors hampered a program's ability to accomplish its goals? Are there consequences of the program that were not anticipated? How do competing agencies see the program? If the target population of the program has made gains, have other groups suffered?

Program evaluation can free educators from considering only what has been intended and allow them to look also at what was unintended, not only in terms of the results of the program, but also in terms of what actually goes into a program. It enables educators to look at political and economic factors that bear on the learning process and the results, and determine to what extent what is learned is actually used. Most important, it enables educators to learn where and how they must intervene to render an educational policy effective.

Conclusions and Practical Implications

For evaluation to be of real use to nonformal education programs with development aims, all of us must be much more critically aware of our ideas about education—specifically about its purported relationship to development. Evaluation is a tool to aid the decision maker not only in monitoring a program, but in assessing whether what is being done is worthwhile. Evaluation is more than a technical procedure; it is a social process with social, political, and economic implications.

Furthermore, planning, programming, and evaluation are all elements of an educational and developmental model. Embedded within this model, whether we are aware of it or not, are assumptions about the problems we are dealing with. These assumptions define for us what the problems are, how they should be dealt with, and how we will know when we are successful in accomplishing our goals. It is important that these assumptions be made explicit and that it be understood that there are many approaches to education which might serve development aims. By being explicit, we risk stirring up ideological controversies, but the risk is well worth taking if it leads to improved program planning, design, and evaluation. It is well worth it if it enables us to use evaluation as a tool to help "identify our mistakes and our achievements as we seek to develop strong and significant education programs."[18] Perhaps the real worth of evaluation is not so much in the answers it eventually provides, as in the reflexive process that it initiates. If that is true, then evaluation will have served its purpose.

[18] Thomas B. Keehn, "Opening Ceremonies," in *International Workshop for Evaluation Specialists on Nonformal Education for Family Life Planning*, Part II (New York: World Education, 1974), p. 11.

II. Evaluation of Broad-Aimed Education Programs

James A. Farmer, Jr.

Innovative forms of "broad-aimed nonformal education" are starting to be developed and implemented in various parts of the world.[1] In contrast to nonformal education programs with relatively narrow aims—such as those seeking primarily to teach literacy or some other skill with little concern for how those skills are later used—broad-aimed programs seek also to affect the quality of the learner's lives through education, and to help the students cope more effectively with their problems. As the statement below indicates, broad-aimed nonformal education can be viewed as a form of education deliberately linked to societal or individual problem solving.

> To the person who can't read—whose job is threatened, whose baby is sick, whose crop has failed, whose in-laws

[1] Philip H. Coombs, *New Paths to Learning: For Rural Children and Youth* (New York: International Council for Educational Development, 1973).

are asking for more grandchildren—what matters are life's daily imperatives. To him, they seem separate problems in a puzzling world.

He copes with them, as he always has, and much as his parents did before him. But his problems are, in fact, the problems of development, and they are interlinked.

Functional education, awakening in him a sense of his own value, can help him solve his problems—which become increasingly complex in an interdependent world—in new and more effective ways.[2]

The Need for Evaluation

Typically it has been necessary to restructure the educational experience to make it relevant to development. The resulting educational programs are thus frequently nonformal or nontraditional by design. Such innovative educational programming deserves relevant, appropriate, and valid evaluation. It would be unfortunate for a broad-aimed educational program to have broken new ground, using nontraditional but effective approaches, only to have those gains misunderstood, misrepresented, and largely negated because the program is evaluated as if it were a narrow-aimed, traditional, or noneducational program.

Thus far, however, the rapid expansion of broad-aimed programs has not been accompanied by systematic evaluation efforts. The reasons for this lag are several: There may be inadequate understanding of ways to conduct a valid evaluation of a broad-aimed nonformal program. Or there may be a belief that the worth of a program can be satisfactorily determined on a subjective and impressionistic basis. There may be a lack of pressure for program accountability or an unwillingness to require or even request that participants provide the feedback necessary for evaluation, or even ambivalence about the worth of evaluation in general.

[2] "Functional Education for Individual and National Development" (New York: World Education, 1974), p. 1.

Despite these and other pressures that militate against evaluation, expressions of the need for systematic ways of evaluating broad-aimed nonformal education programs have surfaced. One response to that need was an effort, initiated in 1972 with assistance from the Ford Foundation and World Education, to develop approaches to the evaluation of broad-aimed nonformal education programs. To do so, attention was focused on the Thai Functional Literacy and Family Life Planning Program, as those conducting the program had expressed a need for more effective evaluation.

The type of evaluation that was developed was concerned with the different data needs of various client groups who were interested in evaluation of a single program. Reflecting a broader approach than that of previous evaluations of the Thai program, it looked at the entire process from initial exposure to an idea, to actual implementation, to the consequences of that implementation.

A detailed description of the approach was used as a background paper for the International Workshop for Evaluation Specialists on Nonformal Education for Family Life Planning, sponsored by the Ministry of Education, Government of Thailand, and World Education. The workshop was held in Chiengmai, Thailand, in 1974. Participants were an international mix of field workers and planners, academicians and practitioners, administrators and funders, specialists and generalists. Their combined efforts were described in a workshop report which included summaries, prepared by the participants, of their views concerning broad-aimed nonformal program evaluation and illustrations of ways in which evaluative data might be obtained.[3] Although the report contained diverse opinions, certain of its recurring themes provide direction for future efforts to strengthen ways of evaluting broad-aimed nonformal education programs.

Care was taken to identify and avoid what, for this type of evaluation, can be considered false assumptions:

1. that more is necessarily better

[3] *International Workshop for Evaluation Specialists on Nonformal Education for Family Life Planning*, Part II (New York: World Education, 1974), pp. 3-4.

2. that the use of evaluative tools such as testing, participant observation, and interviewing, in and of itself, constitutes valid program evaluation
3. that evidence that a broad-aimed program has achieved relatively narrow objectives necessarily establishes its worth as a broad-aimed program
4. that no types of causal relationships can be established between what participants learn in broad-aimed educational programs, how they apply that knowledge in social problem solving, and the consequences of that application
5. that the reduction of a gap between what the funders or administrators intend and what happens in the program is necessarily positive
6. that a valid evaluation of a broad-aimed nonformal education program can be accomplished by focusing merely on components of the program, without regard to the program as a whole or the ways that it interrelates with its environment

Building program evaluation on these or similar false assumptions would involve shortcuts that could significantly distort the evaluative findings.[4] Using distorted feedback can not only harm the program itself but also misrepresent the program and its worth to funders, encouraging them to continue a faulty program or to fund inadequately a worthwhile program.

The Definitional Task

Developing ways to evaluate broad-aimed nonformal education programs is partly a definitional task, entailing careful appraisal and consideration of evidence in order to determine the significance or worth of what is being evaluated. Evaluators are, however, only beginning to ask the relevant questions about what constitutes careful appraisal of broad-aimed nonformal education programs. What will be considered evidence? What are the relevant

[4]Daniel Katz and Robert L. Kahn, *The Social Psychology of Organizations* (New York: John Wiley and Sons Inc., 1966), p. 16.

value standards? And who or what is to determine significance or worth?

Since broad-aimed nonformal education program evaluation holds certain characteristics in common with all forms of educational evaluation, all forms of educational program evaluation, and all forms of broad-aimed evaluation, particularly in areas of societal or community development, it may be possible to adapt various educational program evaluation methodologies for use in evaluating certain, though not all, components of broad-aimed nonformal education programs.

Staffing

Once the decision is made to undertake an evaluation of a broad-aimed nonformal education program, those responsible will need to select the staff. The appointment of evaluation staff, however, will in no way relieve learners, teachers, administrators, or funders from their appropriate and necessary involvement in the evaluation effort. A competent evaluation staff will seek to enhance that involvement.

Ideally, evaluation efforts would be headed by persons who have both academic qualifications and field experience, assisted by persons highly qualified in such disciplines as sociology, anthropology, and psychology, and by a qualified statistician. In addition, funds would be made available for periodic consultation with university specialists. (If qualified personnel are unavailable, development of such an evalaution staff might well be a priority matter. In the meantime valuable efforts can begin. Existing supervisory and teaching personnel and feedback systems can be strengthened and used in obtaining evaluative data.)

To supplement the efforts and capabilities of persons in the program, the program administrator may seek the assistance of an outside evaluator to help diagnose the evaluative needs and help decide on the particular approach to be implemented, to assist with staff training, to help locate or develop appropriate evaluative instruments. Or he may ask the outside expert to perform as the evaluator. Although an external evaluator may perform any or all

of these functions, key program staff should shoulder the major responsibility for the evaluation.

Staff capabilities are likely to vary considerably from project to project. Therefore, external assistance may well be required to upgrade and supplement the capabilities of program staff in designing and implementing tailor-made evaluations of broad-aimed nonformal education programs.

A Decision-Making Approach

There is virtually no end to the number of evaluative questions that could be asked about a broad-aimed nonformal education program. The thought of having to evaluate extensively all aspects of even a moderately sized broad-aimed nonformal education program, including its relationships with its environment, can be overwhelming and can inhibit or terminate further consideration of engaging in such an effort. One of the task forces at the Chiengmai Workshop reported:

> The question-generating approach got wholly out of hand. Questions multiplied like the proverbial rabbits while the members of the task force looked on with Malthusian foreboding. Also, the question-generating process, in which we found ourselves ensnarled, seemed more circular than linear in direction. First, we engaged in fission and smashed big questions into numerous subquestions. Next, reacting in dismay to what we had wrought, we fused subquestions into major questions which closely resembled their forebears of two generations ago. It is not to be denied that futile tasks can be instructive, but it is our duty to urge others to seek a different conveyance rather than mounting our treadmill.[5]

[5] *International Workshop for Evaluation Specialists on Nonformal Education for Family Life Planning*, Part II, (New York: World Education, 1974) p. 151.

Whatever conveyance is used, it needs to lead to program evaluations that are manageable, feasible, and situation specific; that portray the wholeness of programs and the relationship between them and their environments; and that provide a defensible basis for deciding exactly what is needed. In seeking to strengthen the way in which broad-aimed nonformal education programs are evaluated, care must be taken not to use a type of evaluation that so intrudes upon or controls the program that what is being evaluated is no longer representative of the program as it exists in its natural setting. A balance must be maintained between focusing on priority aspects of a program and focusing on the program as a whole and its context. A justifiable evaluation effort must also be cost effective. The money and time spent on a thorough evaluation of all aspects of a program could exceed that required to conduct the program itself.

No prefabricated approach, no evaluative model or design, or any set of general evaluative questions can provide the type of evaluations that have all the above characteristics. Rather, a "decision-making" approach is called for. In this approach, persons associated with the program, along with one or more external evaluators and possibly a representative of those who help fund the program, collaborate in planning and conducting a specific evaluation effort that takes into account each of the foregoing conditions.

Looking at only a few isolated components of a program is an invalid approach to evaluation. Yet under most circumstances, evaluating a whole program in great depth is not feasible. One effective tool in the decision-making process might be what Amitai Etzioni calls "mixed scanning," which entails scanning a program and its environment much as an infantry scout scans a battlefield under fire.[6] The scout rapidly views his strategic position, identifies potential danger or opportunity spots, and gives them close scrutiny. He does not have time to gather all the facts, nor can he look at only what is in front of him. His task is to scan, assign priorities, and select those areas that need careful scrutiny.

[6] Amitai Etzioni, *The Active Society* (New York: The Free Press, 1968), p. 284.

Failure to do this may well result in a missed opportunity or a costly mistake.

Such a "mixed-scanning" approach was taken in the program evaluation model proposed for the Thai Functional Literacy and Family Life Planning Program.[7] In this approach, the program and its environment are initially viewed rapidly and as a whole. Then, based on what is found in that examination, a hard decision needs to be made: Given X resources (money, staff, and time) for the evaluation effort; and given Y pressure (for a certain type of evaluation, be it formative or summative); and given the need to be comprehensive, systematic, and to do justice to the various role perspectives of those involved in, or concerned about, the program—what aspects of the program need to be and can be examined more closely?

If little or nothing is known about the results of the program, major attention might well focus on results. If, however, there is ample evidence of the nature and extent of the results and reason to think that some of its components are functioning unsatisfactorily, then major attention might better focus on the educational process, on the program inputs from learners, teachers, and administrators, and on the program's context.

In this decision-making process, care needs to be taken not to identify as critical so many aspects that the evaluative effort becomes swamped with too many details. At the same time, the evaluator will want to examine the aspects selected from the point of view of the program as a whole—how they fit into and affect the program, and how much they contribute to the overall worth of the program.

A process called dimensional sampling can be useful in this mixed scanning of programs, contexts, concepts, and consequences. Dimensional sampling involves three steps: determining which portion of the population you wish to consider for your evaluation; determining how the members of this group vary and

[7] James A. Farmer, Jr., Kasama Voravarn, and Kowit Vorapipatana, "A Design for Evaluating the Thai Functional Literacy and Family Life Education Program," in *International Workshop for Evaluation Specialists on Nonformal Education for Family Life Planning*, Part I (New York: World Education, 1974), pp. 1-29.

trying to get a representative grouping; and selecting a small sample of persons from this grouping, possibly from each subgroup with different characteristics.[8]

To protect against bias, the dimensions along which the cases vary may be laid out and then at least one example of each case should be examined. When determining the dimensions of a broad-aimed nonformal education program, the following components will typically need to be scanned:

1. need for the program
2. philosophical considerations
3. values
4. assumptions underlying or otherwise related to the program
5. the degree of the program's development, in general and in local situations
6. the context or environment in which the program functions
7. alternative ways that the program has been and is being implemented
8. consequences of the program
9. explanations of consequences—the extent to which those consequences have been attributed to the program

The effectiveness of a program is judged not only by each of these components, but also, and perhaps more importantly, by the relationship between them. This relationship is most apparent at points where the major outcome of one component is a major input of another component.

Mixed-scanning of a broad-aimed nonformal education program can be undertaken in four phases:

Phase I. Consideration of the philosophy, values, and assumptions underlying the program; the degree of the program's development; and the program's context

Phase II. Consideration of alternative implementations

Phase III. Consideration of consequences

Phase IV. Consideration of explanations of consequences

[8] D.L. Arnold, "Dimensional Sampling: An Approach for Studying a Small Number of Cases," *The American Sociologist*, May 1970, pp. 147-149.

Phase I: Philosophy, Values, and Assumptions; Degree of Program Development; Context

The evaluator can begin by reviewing published and informal official documents, research reports, and program reports, and by interviewing key personnel—particularly the administrators who have primary responsibility for the program.

In these initial efforts, the evaluation staff will need to identify and seek to understand the philosophy, values, and assumptions of the program. They will need to familiarize themselves with the degree of the program's development as a whole and, if it has been offered in more than one place, in various locations. And they will need to become knowledgeable about the context in which the program functions.

a. Philosophy, values, and assumptions

The philosophy, values, and assumptions underlying the program need to be identified and considered in terms of their appropriateness for meeting the needs that the program addresses; their logical consistency and interrelationships; their implications for the program; and their implications as a source of criteria or standards by which the program can be evaluated.

In a particular program, value may have been placed on helping illiterates to learn to solve problems, including being able to overcome misconceptions, and to understand logical causal relationships. The program may have been designed to help the learners to understand and use modern scientific, economical, or safe practices related to earning a living, functioning as consumers, coping with health problems, engaging in family planning, and exercising civic responsibility. At the same time, efforts may have been made to ensure that what is experienced and learned in the program is compatible with certain cultural or religious values. Decisions need to be made concerning how to consider and interpret data in the light of conflicting philosophies, values, and assumptions. The way these matters are handled may vary from country to country and even from program to program.

b. Degree of program development

The degree to which the program has developed also needs to be taken into consideration. It would be unfair to evaluate programs

that have very different circumstances—for example, a new class in a remote sensitive area struggling against many problems and obstacles, and the most fully developed program in the country operating in relatively favorable circumstances—as if they were identical. Both may be found to be excellent programs, given their different degrees of development.

c. Context

The context of an evaluation helps determine what can realistically be expected. Contextual factors include the socio-economic, cultural, religious, political, and geographic aspects of the environment in which the program functions.

Sample Questions

Questions that evaluators might ask about the philosophy, values, and assumptions underlying the program, the degree of the program's development, and the program's context include:

1. What philosophy or philosophies underlie the program? How were they selected? Who agrees with them? Who disagrees with them? Why?
2. What values are held by persons involved with the program? To what extent is there disagreement about what is valuable in the program, and what is considered to be excellent, very good, good, fair, and poor implementation of the program under typical circumstances? What are the main differences in this regard and what are their implications for the program?
3. What assumptions are held about the program?
4. To what extent has the program been developed? What is the stage of development of the typical program and of the most fully developed program? How do each of these stages of development relate to what those responsible for the program consider to be the nature of the program, and their current expectations for the program?
5. In what type of context (geographic, economic, sociological, political, religious, cultural) does the program function as a whole? Which of the main effects of the context on the program need to be considered in evaluating the program? What are the facilitating and limiting factors?

Phase II: Alternative Implementations

The second phase of the evaluative effort focuses on the alternative implementations of the program in terms of intended and observed inputs and transactions. The main inputs into educational systems include learners, teachers, curriculum, administrative viewpoints, planner and participant expectations and goals, facilities, money, and so on. Transactions are all that happens in the program itself; principal transactions are teacher-learner interactions, recruitment processes, and administrative practices.

Alternative implementations of the program occur when inputs or transactions vary. The curriculum, for instance, may be developed in more than one version so as to accommodate differences in religion, culture, or the type of farming engaged in by the learners. The different programs that result are alternative implementations. Or teachers may receive a particular type of training; some actually use the teaching-learning process they have been taught whereas others revert to the traditional methods of teaching that they learned in teaching children. The result would be an alternative implentation—a modification in the intended teaching-learning transaction.

A distinction must be made between intended inputs and transactions and the actual observed inputs and transactions. The evaluator needs to identify and compare the intended and the observed inputs and transactions.

The evaluator will also want to compare the way in which the program is implemented and the way its main "competitors" (for example, fundamental education, Unesco's Work-Oriented Functional Literacy Programs, FAO's Programs for Better Family Living) have been implemented. For the purposes of evaluation, the various implementations of the program and its competitors can be considered to be comparison groups.

Further, baseline studies to determine the need for the program being evaluated can provide useful information in contrasting the characteristics of those who have received alternative implementations and those who have not.

The evaluator should also become familiar with the main ways

the program and its competitors have worked. Otherwise it will be virtually impossible to specify to what particular positive and negative consequences can be attributed. To conduct either formative or summative evaluations, the evaluator needs not only to be able to determine that a program has had an effect, but, more importantly, to be able to specify which alternative implementations typically lead to more favorable consequences and deserve reinforcement, and which do not.

Sample Questions

The types of questions that might be asked in this phase of the evaluation are:

1. What are the formal goals and objectives of the program? Who set them? Are they still relevant to the program? Are they the critical ones and does the program actually answer their demands? If not, what informal aims and objectives are being used and why?
2. What are the major intended inputs and transactions of the program and its competitors? What are the major observed inputs and transactions? How do these compare? What explanations are given or can be determined for any existing discrepancies? (For instance: It is intended that the curriculum should arrive at a certain village in time for the first session, but it is observed, two weeks later, that the curriculum is not being used. The explanation given is that there had been a flood and the curriculum could not be delivered.)
3. What needs of the nation does the program seek to meet?
4. What needs of individual learners does the program attempt to meet?
5. What other needs does the program address? Whose needs are they? Why are they important to the program?
6. Are the same results observed among nonparticipants in the program as among participants?

Phase III: Consequences

A framework for analyzing the results of broad-aimed nonformal education programs, developed at the International Work-

shop for Evaluation Specialists, identified three main areas as the focus of examination:

1. the acquired knowledge, skills, and affective behaviors (attitudes, interests, beliefs, values) that the learner has gained from the program
2. the way the learner has utilized acquired knowledge, skills, and affective behaviors in dealing with everyday life
3. the consequences attributable, totally or in part, to the acquisition and utilization of knowledge, skills, and affective behaviors

These consequences could affect the learner, his or her family, and the community. By solving a problem, the learner may function more effectively, achieve greater harmony with the environment, and gain a new sense of personal efficacy. The family is affected if, for example, by using birth control, the learner has more available funds to meet the nutritional needs of each child already in the family. And the community is affected if the learner's new practices (for example, no longer burning rice stalks after harvest) serve as an example which other farmers in the community follow.

Consequences can be further classified according to whether or not they were intended and anticipated:

1. Intended and anticipated: For example, participants in a literacy program develop an ability to read. (It is important to note whose intentions these are—those of program planners, participants, teachers, or supervisors.)
2. Unintended but anticipated: A certain result was not planned but was considered as a possible side effect. For example, women who learn about family planning and use birth control methods, such as a loop, may develop uterine disorders.
3. Unintended and unanticipated: The outcome was neither planned nor considered as a possibility. For instance, farmers might have been taught to rotate their crops, and one year they grow peanuts instead of rice. The market for peanuts that year might collapse and the farmers go bankrupt.

The levels of acquired knowledge, skills, and affective behaviors of the learners and their utilization before, during, and after a

program could be expressed in behavioral terms as a hierarchy to help in identifying them.[9] Care needs to be taken, however, not to confuse a program's *objectives* (inputs to the program) with the program's *consequences.* In an evaluation of a broad-aimed program, it would be invalid to consider only the intended consequences, based on a program's educational objectives. Attention should be paid to outcomes that were intended by the learners as well as to unintended consequences.

Typically, in broad-aimed educational programs the intent is not directly to affect the lives of the learners by other than educational means nor to manipulate them to take predetermined actions. As Jack Mezirow has observed:

> The essence of education is that it does not drive people to accept predetermined ends but, instead, fosters the initiative in them to participate intelligently in the choice of ends. Educators do not set out to convince, persuade, or engineer consent. This is the realm of propagandists. Rather, educators help people to become more aware, to understand more clearly, to decide more rationally whether or not to adopt [one type of practice in favor of another].[10]

Most broad-aimed nonformal education programs intend to contribute to the efforts of learners to improve the quality of their lives and to assist them in overcoming misconceptions and in learning ideas and attitudes that could be of value in their own efforts to cope with their problems.

In this kind of evaluation, the evaluator will want to differentiate between what is intended and what is only hoped for.

> In a broad-aimed educational program, the programmatic intent generally is to assist learners to acquire knowledge, comprehension, cognitive problem-solving skills, and

[9] The categories used by Bloom and Krathwohl are a useful starting point in identifying the consequences of broad-aimed nonformal education programs. See Benjamin S. Bloom et al., *Taxonomy of Educational Objectives-The Classification of Educational Goals,* Handbook I: Cognitive Domain (New York: David McKay Co., 1956).

[10] Jack Mezirow, "Educating Adults in Family Planning," in *Issues,* no. 1 (New York: World Education, September 1972), p. 2.

affective behaviors. It is generally hoped (unintended but anticipated) in such a broad-aimed program, that the learners will engage in real-life problem solving, given proper circumstances and provided they can obtain additional necessary resources. It is further hoped that certain negative (unintended but anticipated) side-effects will not be incurred because of the method(s) employed in the real-life problem-solving activities. However, it needs to be realized that certain unintended and unanticipated forms of learning, problem-solving and its consequences, may occur as well.[11]

In short, broad-aimed nonformal education programs are purposive, since they are meant to serve useful ends or functions. To evaluate a broad-aimed nonformal education program exclusively in terms of its contribution to developmental efforts would be to ignore its educational nature. For example, it would be invalid to evaluate a broad-aimed nonformal education program for fishermen exclusively in terms of the increased number of fish caught by those who had completed the program. This would particularly be the case if they had learned how to solve problems in the program, including those related to fishing, and then, for reasons beyond the program's control, appropriately redirected their problem-solving efforts to problems which, for themselves and their nation, had a higher priority than increasing the fish-catch. Similarly, however, it would be invalid and irresponsible to evaluate such a program by examining only the learning experiences and what was learned, with no consideration of the consequences.

Methods

Evaluative data on the consequences of a program can be obtained by analyzing reports, administering pre-tests and post-tests to the learners, field observation, and field interviews. Testing can be done by classroom teachers, in keeping with existing practices. The evaluation staff will need to review tests of learner achievement and, if necessary, revise these tests or develop different ones.

[11] *International Workshop for Evaluation Specialists*, Part II, p. 16.

Field interviewing, supplemented with field observation, can be conducted with samples of learners, headmen and other villagers, teachers, supervisors, administrators, and others knowledgeable about the intermediate and ultimate consequences of the program.

What L. A. Dexter calls "elite" interviewing offers the best opportunity to uncover results that might otherwise not be apparent. Dexter has described an elite interview as:

> . . .an interview with any interviewee—and the stress should be on the word "any"—who in terms of the current purposes of the interviewer is given special, nonstandardized treatment. By special, nonstandardized treatment, I mean: (1) stressing the interviewee's definition of the situation; (2) encouraging the interviewee to structure the account of the situation; (3) letting the interviewee introduce . . . his notions of what he regards as relevant, instead of relying upon the investigator's notion of relevance.[12]

In most interviewing the investigator defines the question and the problem; he is looking for answers within the bounds set by his presuppositions. In elite interviewing, however, the investigator is willing and often eager to let the interviewee teach him what the problem, the question, the situation, is—to the limits, of course, of their ability to perceive relationships pertinent to the basic problems. In the standardized interview a deviation is ordinarily handled statistically; but in an elite interview an exception, a deviation, an unusual interpretation may suggest a revision, reinterpretation, an extension, or a new approach which may be of great value to evaluation.

Phase IV: Explanations of Consequences

Of critical importance to the evaluation is finding out why the learners and others believe the consequences took place. Do they attribute these consequences to what was learned in the pro-

[12] L.A. Dexter, *Elite and Specialized Interviewing* (Evanston, Ill.: Northwestern University Press, 1970).

gram?[13] Or do they attribute the consequences to some other cause—luck, the intervention of another agency, or the villagers' own voluntary efforts?

In examining the consequences of a program, the evaluator needs to identify *verifiable* and *imputed* consequences. *Verifiable consequences* are ones for which there is empirical evidence. *Imputed consequences* are those which interviewees attribute to the program. For example, learners, other villagers, and the village headman may report that animals are no longer kept under the villagers' houses but in a common village livestock enclosure, and that this change took place only because of the program being evaluated. They also state in the interviews that the number of illnesses traceable to animals has dropped noticeably since the animals have been moved, and further, that no animals have been lost from the village enclosure by theft. In addition, they indicate that, as unanticipated and unintended consequences, it is now easier for the villagers to feed the animals and that this has led to a gradual increase in the number of animals in the village. It would not be possible to verify by written or observable evidence that all of these changes did actually take place because of the educational program. However, it would be possible to obtain empirical evidence in the form of statistics on the incidence of illness or the increase in numbers of livestock in the village.

Similarly, a learner and his wife, parents of six children, may report that the quality of their lives has improved since they stopped having children. They report that the husband had attended a broad-aimed nonformal education program conducted in the village for two years, learning, among other things, to read and write. He also learned about problems resulting from having too many children. In the class, moreover, he learned about alternative solutions to his problem. He decided that the use of birth control pills by his wife would be the best solution. His wife agreed and began taking birth control pills regularly.

When asked about the consequences of having no more babies

[13]Robert H. Ennis, "On Causality," *Educational Research*, vol. 2, no. 6, American Educational Research Association, June 1973.

during the past two years, the wife responded that she has enough food and time for each of her children. She added that she was pleased with the results of having taken the pills, that there had been no negative side effects, and that she had encouraged several of her neighbors to take birth control pills. This, too, is imputed to the program. The verifiable consequences would be difficult to obtain, in such an instance. Statistical evidence may have to be a substitute. The types of questions for this phase of the evaluation are of two kinds: First, based on the pre- and post-tests, to what extent have there been knowledge and attitude changes (positive or negative)? To what extent are these changes statistically significant or otherwise important when compared to the results of the contrast groups (alternative implementations) and control groups? In other words, what types of contexts, inputs, and transactions are found to contribute to what types of consequences? Secondly, what did learners do with what they learned? What have been the consequences of the utilization of what was learned? Which of these consequences were intended and which were not intended? Which were anticipated by the teacher or the curriculum writers and which were not anticipated? To what extent are these consequences valued—as being positive, neutral, or negative—by those involved in or responsible for the program?

Interpretation of Consequences

In interpreting the program's consequences, the evaluator must take into consideration the *feasibility* of hoped-for consequences. The learners can hardly be expected to understand the nature of problems that are not understood by anyone else. Nor can they reasonably be expected to arrive at acceptable solutions to problems for which no other person has been able to identify any solution that is scientifically acceptable as well as being acceptable to persons similar to the learners. Further, the ability to solve certain problems may depend on the availability of additional expertise, equipment, or materials. If these prerequisites are not available to the learners and cannot be obtained, it is not realistic

to expect the learners to solve these problems (for instance, to expect that a man will request a vasectomy if the nearest clinic is 50 miles away).

In broad-aimed nonformal education program evaluation, care must be taken to gather, interpret, and utilize evaluative data in such a way that the evaluation does justice to learners, teachers, administrators, and funders alike. The program and its context, the definitions of social need, educational content and process, the nature and extent of a program's consequences, and the values to be used in evaluating the program—none of these elements should be viewed exclusively from the perspectives of any one group. To the extent possible, evaluative efforts should be designed to help each of these groups more adequately understand and appreciate the program from the other role perspectives. A particular evaluative effort may help learners to appreciate definitions of their needs about which they had been previously unaware. At the same time, administrators and funders may be helped to understand and appreciate felt and expressed needs.

Practical suggestions for implementing the type of evaluation described here are presented in the Appendix. Of particular note in that list of suggestions is the care that needs to be taken throughout the whole evaluative process to increase the likelihood that the results of the evaluation itself will lead to program improvements.

An innovative broad-aimed nonformal education program may have broken new ground and have effects quite different from those anticipated. Only when the program and its consequences have been experienced can those involved, with the assistance of appropriate evaluative feedback, be in a position to identify relevant values by which the program can be validly judged.

APPENDIX

Twenty Rules of Thumb for Conducting an Evaluation

by Arden D. Groteleuschen, Dennis D. Gooler, and Alan B. Knox

The procedures used in actually conducting an evaluation are determined in part by what questions are being addressed by the evaluation, the techniques selected for collecting data, and the audiences to whom the data will be reported. Most evaluations are unique to the situation being evaluated. There are, however, some general rules of thumb which might be attended to in successfully conducting any evaluation.

1. Someone needs to be responsible for conducting the evaluation. Too often, all the details involved in conducting an evaluation are allowed to fall through the cracks because no one has been designated to worry about details. Most

evaluation plans are not automatically implemented without someone taking charge.

2. Make sure everyone is informed about what is going on in an evaluation activity. Evaluation ought not be a mysterious, cloak and dagger operation. Go over evaluation plans, including data processing plans, with all relevant program personnel, so there are no surprises with respect to what is going to happen in the evaluation.
3. Insofar as possible, be redundant in data gathering on the concerns that are important to the evaluation. Seek to ask about a program (or its aspects) in several different ways. Insight and understanding often comes with repeated encounter.
4. Give careful directions for all data gathering instruments. Make sure the person from whom you are requesting information understands what you are asking for.
5. Be aware of the pressures and constraints on the program being evaluated. If people are being harassed on a day you are asking them for information, be prepared to come back another time. Do not intrude into the program.
6. Do not promise things which you cannot deliver. This is especially true with respect to time, promises of anonymity, and keeping of confidences.
7. Be aware that you are investigating aspects that are of personal and professional importance to the people working in a program. Do not dismiss a person's work without giving it careful attention.
8. Insofar as possible, be unobtrusive.
9. Early on, establish ground rules about who will have access to evaluation results, and when.
10. Collect only those data for which you have some rationale. . . .
11. Keep your eyes open for the unexpected or unintended. Do not let an evaluation plan act as a blinder.
12. In most cases, evaluators ought not to assume the role of decision maker. Evaluators might spell out options, but ought not to allow themselves to make decisions for the program administrator or teacher.

13. Be open and responsive to client needs and interests. Remember that client interests may shift as the evaluation progresses.
14. Be positive. Being an evaluator does not mean you look only for the negative. . . .Assume a project is basically good, and that evaluation is an attempt to make it better.
15. Provide feedback as appropriate. Be flexible, but not premature, in sharing evaluative data.
16. Before you ask questions, make sure you understand what some of the consequences might be of asking those questions. Make sure you are willing to deal with those consequences.
17. Be business-like. Show people you know what you are doing without being apologetic or pompous.
18. Be able to tolerate ambiguity. You may not always get answers to the questions you ask.
19. If possible, get someone to react to your evaluation plans before implementing the plans. But know when to stop asking for advice.
20. Give a personal thanks to those who participated in the evaluation, insofar as possible. People have given up some part of their time to assist in the evaluation.

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